

### **ABSTRACT**

A chemical composition including a moiety comprising a quencher (Q), a tethering element (T), and a ligand (L) that associates with and quenches a fluorescent polymer is disclosed. When an analyte sample is introduced, the ligand (L) binds to a target biological agent if it is present, thereby causing the QTL molecule to separate from the fluorescent polymer resulting in an increase in detected fluorescence. The same chemistry is advantageously employed in a competitive assay. An electric field can also be applied to separate the QTL molecule from the fluorescent polymer. A method for detecting targets for these methods are also disclosed.